PB90-261603

Cadmium: Position Document 2/3. Notice of Preliminary Determination to Cancel Registrations and Deny Applications for All Pesticide Products that Contain Cadmium Compounds Notice of Availability of Technical Support Document and Draft Notice of Intent to Cancel

(U.S.) Environmental Protection Agency, Washington, DC

Oct 77

U.S. Department of Commerce
National Technical Information Service
NTIS

50272-101			
REPORT DOCUMENTATION PAGE	1. REPORT NO.	2.	3. PB90-261603
4. Title and Subtitle CADMIUM - POSITION DOCUMENT 2/3			5. Report Date October 1977 6.
7. Author(s) EPA, OPP, REGISTRATION DIVISION			8. Performing Organization Rept. No. 540/09-90-109
9. Performing Organization Name and Address ENVIRONMENTAL PROTECTION AGENCY OFFICE OF PESTICIDE PROGRAMS WASHINGTON, D.C. 20460			10. Project/Task/Work Unit No. 11. Contract(C) or Grant(G) No. (C) (G)
12. Sponsoring Organization Name and Address SAME AS #9			13. Type of Report & Period Covered 14.

15. Supplementary Notes

16. Abstract (Limit: 200 words)

Cadmium compounds are contained as active ingredients in pesticides and The fungicides.

This Position Document addresses the risks and benefits of pesticide products containing the subject active ingredient. The Agency has determined that the use of products containing the subject active ingredient may meet or exceed a risk criterion described in 40 CFR Part 154. Potential hazards will be examined further to determine the nature and extent of the risk, and considering the benefits of the subject active ingredient, whether such risks cause unreasonable adverse effects on the environment.

17. Document Analysis a. Descriptors

PESTICIDES, STANDARDS, REGULATIONS, MANUFACTURING, CHEMISTRY, TOXICOLOGY, RESIDUES, ECOLOGY, PATH OF POLLUTANTS

b. Identifiers/Open-Ended Terms

c. COSATI Field/Group

18. Availability Statement	19. Security Class (This Report)	21. No. of Pages
PUBLICLY AVAILABLE	UNCLASSIFIED	14
	20. Security Class (This Page) UNCLASSIFIED	22. Price

(See ANSI-Z39.18)

REPRODUCED BY
U.S. DEPARTMENT OF COMMERCE
NATIONAL TECHNICAL
INFORMATION SERVICE
SPRINGFIELD, VA 22161

OPTIONAL FORM 272 (4-77)
(Formerly NTIS-35)
Department of Commerce

FR 23

PB90-261603

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ENVIRONMENTAL PROTECTION AGENCY

OFFICE OF PESTICIDES AND TOXIC SUBSTANCES

[OPP-30000/20C]

NOTICE OF PRELIMINARY DETERMINATION TO CANCEL REGISTRATIONS AND DENY APPLICATIONS FOR ALL PESTICIDE PRODUCTS THAT CONTAIN CADMIUM COMPOUNDS; NOTICE OF AVAILABILITY OF TECHNICAL SUPPORT DOCUMENT AND DRAFT NOTICE OF INTENT TO CANCEL

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Preliminary Determination; Notice of Availability.

SUMMARY: This Notice announces EPA's preliminary determination to cancel registrations and to deny applications for all pesticide products that contain cadmium compounds (salts of chloride, sebacate, succinate, carbonate, and anilinocadmium dilactate) as active ingredients and that are for use on turf sites. The proposed action is based on the Agency's determination that the use of cadmium fungicides will result in unreasonable adverse effects to applicators of the products for these uses. This Notice further informs the public of the availability of a draft Notice of Intent to Cancel and documents in support of this action.

DATE: Comments from the public on this notice must be received on or before (insert date 45 days from publication in the FEDERAL REGISTER).

86P-997

ADDRESS: Three copies of written comments, identified by the docket number [OPP-30000/20C] should be sent to: By mail:

Information Services Section,
Program Management and Support Division (TS-757C),
Office of Pesticide Programs,
Environmental Protection Agency,
401 M St., SW.,
Washington, D.C. 20460.
In person, bring comments to:
Rm. 236, CM#2,
1921 Jefferson Davis Highway,
Arlington, VA.

FOR FURTHER INFORMATION CONTACT: By mail:

Valerie M. Bael,
Registration Division (TS-767C),
Office of Pesticide Programs,
Environmental Protection Agency,
401 M St. SW.,
Washington, D.C. 20460
Office location and telephone number:
Rm. 1006, CM#2,
1921 Jefferson Davis Highway,
Arlington, VA,
(703-557-2314).

SUPPLEMENTARY INFORMATION:

I. COMMENTS AND DOCKET

The Agency has established a public docket for the Cadmium Special Review. The docket will contain all public comments as well as other relevant Agency documents pertaining to the Special Review. For a complete list of the categories of documents which are placed in a Special Review docket, see 40 CFR 154.15.

All interested persons may submit comments, regarding the risks and benefits associated with the use of cadmium pesticides and the Agency's proposed decision, to the address given above.

On a monthly basis, the Agency will distribute a compendium of indices for newly received comments and documents that have been placed in the public docket for this Special Review. This compendium will be distributed by mail to those members of the public who have specifically requested such material for this Special Review.

Information submitted in any comment or response concerning this Notice may be claimed confidential by marking any part or all of that information as Confidential Business Information (CBI). Information so marked will not be disclosed except in accordance with procedures set forth in 40 CFR Part 2. To assert a claim of confidentiality for all or any part of a written submission concerning a Special

Review, the submitter must furnish three copies of the material. Two complete copies must be submitted, with claimed CBI clearly marked in the text. Items in the document that are claimed confidential should be numbered consecutively throughout the text. The third copy must have the claimed CBI excised from the text without closing up or paraphrasing the remaining text. The deletions should be consecutively numbered to correspond to numbering of the complete copies. Each copy must be marked on the cover as to whether it contains claimed CBI. Information not marked confidential may be made available through the docket or otherwise disclosed publicly by EPA without prior notice to the submitter.

The docket and index will be available for inspection and copying from 8 a.m. to 4 p.m., Monday through Friday, except legal holidays, at the following location:

Program Management and Support Division,
Rm. 236, CM#2,
1921 Jefferson Davis Highway,
Arlington, VA.

II. INTRODUCTION

The Agency issued a notice commencing a Special Review of cadmium pesticides, as published in the FEDERAL REGISTER of October 26, 1977 (42 FR 56524). The Special Review was based on the determination that the use of cadmium pesticide products exceeded risk criteria relating to oncogenicity, mutagenicity, teratogenicity and fetotoxicity. Following

review of public comments and available data, the Agency determined that the risk concerns for oncogenicity remained, and risk concerns for other acute and chronic effects (kidney effects) have been added. Risk concerns for mutagenicity, teratogenicity, and fetotoxicity no longer remain. The Agency also concluded that the use of cadmium fungicide would result in unreasonable adverse effects on applicators of the products to turf. Therefore, the Agency proposes in this Notice to deny applications and cancel registrations of cadmium pesticide products for this use.

III. STATUTORY AND REGULATORY BACKGROUND

A. THE STATUTE

A pesticide product may be sold or distributed in the United States only if it is registered or exempt from registration under the Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) as amended (7 U.S.C. 1136 et seq.). Before a product can be registered, it must be shown that it can be used without "unreasonable adverse effects on the environment" (FIFRA section 3(c)(5)), that is, without causing "any unreasonable risk to man or the environment, taking into account the economic, social, and environmental costs and benefits of the use of the pesticide" (FIFRA section 2(bb)). The burden of proving that a pesticide meets this standard for registration is, at all times, on the proponent of initial or continued registration. If at

any time the Agency determines that a pesticide no longer meets this standard for registration, then the Administrator may cancel the registration under section 6 of FIFRA.

B. THE SPECIAL REVIEW PROCESS

The Special Review process, formerly called the Rebuttable Presumption Against Registration (RPAR), is a mechanism by which the Agency collects information on the risks and benefits associated with the uses of pesticides to determine whether any use causes unreasonable adverse effects on the environment. The Special Review process is governed by 40 CFR Part 154.

Through the Special Review process the Agency (1) announces and describes its risk concerns regarding pesticidal use based on certain risk criteria; (2) establishes a public docket; (3) solicits comments from the public, and under certain circumstances, from the Secretary of Agriculture and the Scientific Advisory Panel (SAP) regarding the Agency's analysis and proposed regulatory decisions; (4) reviews and responds to all significant comments timely submitted; and (5) makes a final regulatory decision based on a balancing of risks and benefits associated with a pesticide's use.

IV. PRELIMINARY DETERMINATION TO CANCEL

The Agency, by issuing this Notice of Preliminary Determination, is proposing to cancel registrations and deny applications for registration for all pesticide products that contain cadmium compounds (salts of chloride, sebacate,

succinate, carbonate and anilinocadmium dilactate) as active ingredients and that are for use on turf sites. This action is based on the Agency's determination that the use of cadmium fungicides will result in significant risks to applicators of the products for this use. The Agency has has also determined that the risk associated with this use is not outweighed by its relatively minor benefits as discussed in detail by the Agency in the Technical Support Document.

The Agency evaluated laboratory animal and human epidemiological studies for cadmium's potential to cause toxic effects. Both types of studies indicate that cadmium compounds are oncogenic and can cause kidney effects. The Agency also evaluated applicator exposure studies. In comparing the results of the toxicological studies with the estimated applicator exposures, the Agency concluded that there is up to a 10^{-4} lifetime risk of oncogenicity to certain applicators and a very close association between applicator exposure levels and kidney effect levels.

Data from a chronic rat inhalation study using cadmium chloride aerosol, and from an epidemiological study of factory workers who were chronically exposed to cadmium oxide and dust, suggest statistically significant, dose-related increases of lung tumors. Based on these and results of other studies, cadmium has been classified by the Agency as a "B1" or "probable" human carcinogen (Guidelines for Carcinogenic Risk Assessment 1986).

Based on results from other laboratory animal studies and a human epidemiological study of factory workers who were chronically exposed to cadmium compounds, the Agency concludes there is a significant association between dermal and inhalation exposure and kidney effects, including proteinuria and kidney dysfunction. The Agency has concluded that the cancer and kidney effects associated with cadmium exposure exceed the criteria for special review set out in 40 CFR Part 154.

The pesticidal usage of cadmium compounds is estimated to be approximately 30,000 pounds per year. This represents less than 0.1 percent of the total cadmium usage (30,000 to 35,000 tons) in the United States for industrial purposes. Although registered for use on both golf course and home lawn turf, cadmium fungicides are used almost exclusively by turf maintenance personnel on golf courses.

The Agency reviewed information concerning the benefits relating to cadmium fungicide uses. The benefits were assessed relative to the economic impacts which would result if cadmium compounds were cancelled and users chose to use alternative fungicides. Agency estimates suggest that the annual impacts on the principal use site, golf courses, may be approximately $240,000 for the affected golf courses, or approximately $500 per golf course using cadmium compounds. The impacts on other turf sites would be negligible.

In weighing the risks and benefits and considering regulatory options, the Agency considered measures to reduce applicator exposure and risk. Protective clothing

requirements and imposition of a requirement prohibiting use of hand-held spray equipment were considered; however, the Agency evaluated the effectiveness and utility of these measures and concluded that they would not adequately mitigate exposure and risk.

Also, the Agency is concerned about the purposeful addition of a heavy metal (cadmium) to the environment. Cadmium pesticide products are produced for the intent of direct application to sites in the environment in comparison to cadmium compounds that enter the environment as by-products of industrial production. Given the commonly recognized undesirable characteristics of adding heavy metals to the environment, the high (30 pounds/acre/year) application rate, and the low benefits from applying cadmium pesticides, the Agency does not believe it prudent to permit the continued use of cadmium pesticides.

Therefore, in consideration of the toxicological effects of cadmium compounds, the estimated potential risks of these effects to applicators, the lack of effective measures to mitigate these unacceptable risks, the availability of effective alternatives, an estimated minor economic impact to users, and the undesirable practice of purposefully adding high levels of a heavy metal to the environment the Agency has made a preliminary determination that risks of use of cadmium for turf disease control outweigh the benefits of such use. Therefore, the Agency proposes to cancel registration

and deny application for all turf uses of cadmium pesticide products. This is based on the Agency's judgment that the risks of continued cadmium use outweigh the associated benefits.

V. AVAILABILITY OF TECHNICAL SUPPORT DOCUMENT AND DRAFT NOTICE OF INTENT TO CANCEL

The Cadmium Technical Support Document (TSD) discusses in detail the basis for the issuance of the Notice of Preliminary Determination proposing to cancel registrations and deny applications for registration for all pesticide products that contain cadmium compounds as active ingredients in pesticide products that are for use on turf sites. In addition, a draft Notice of Intent to Cancel (NOIC) Notice has been prepared for transmittal to the U.S. Department of Agriculture (USDA) and the SAP pursuant to sections 6 and 25 of FIFRA. Copies of this Notice of Preliminary Determination and the TSD will also be transmitted to the SAP and USDA. The draft NOIC and the TSD are available to the public on request. Copies of these documents may be obtained from Valerie M. Bael, Registration Division, at the address/telephone number given above.

Dated: 30 Sept 86

Assistant Administrator
for Pesticides
and Toxic Substances.

FR 10/10/86

ENVIRONMENTAL PROTECTION AGENCY

[OPP-30000/20C; PRL-3094-3]

Preliminary Determination To Cancel Registrations and Deny Applications for All Pesticide Products That Contain Cadmium Compounds; Availability of Technical Support Document and Draft of Intent To Cancel

AGENCY: Environmental Protection Agency (EPA).

ACTION: Notice of Preliminary Determination; Notice of Availability.

SUMMARY: This Notice announces EPA's preliminary determination to cancel registrations and to deny applications for all pesticide products that contain cadmium compounds (salts of chloride, sebacate, succinate, carbonate, and anilinocadmium dilactate) as active ingredients and that are for use on turf sites. The proposed action is based on the Agency's determination that the use of cadmium fungicides will result in unreasonable adverse effects to applicators of the products for these uses. This Notice further informs the public of the availability of a draft Notice of Intent to Cancel and documents in support of this action.

DATE: Comments from the public on this notice must be received on or before November 24, 1986.

ADDRESS: Three copies of written comments, identified by the docket number [OPP-30000/20C] should be sent to: By mail:

Information Services Section, Program Management and Support Division (TS-757C), Office of Pesticide Programs, Environmental Protection Agency, 401 M St., SW., Washington, DC 20460.

In person, bring comments to:

Rm. 236, CM # 2, 1921 Jefferson Davis Highway, Arlington, VA.

FOR FURTHER INFORMATION CONTACT: By mail:

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V. Availability of Technical Support Document and Draft Notice of Intent To Cancel

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Dated: September 30, 1986.

John A. Moore,

Assistant Administrator for Pesticides and Toxic Substances.

[FR Doc. 86-23011 Filed 10-9-86; 8:45 am]

BILLING CODE 6560-50-M